

without departing from the spirit and scope of the invention.

What is claimed is:

1. A data processing and display method for use in interactive manufacturing process management comprising:

uploading a first variable value for a manufacturing stage from a database;

subtracting said first variable value from a first target value to obtain a first variable variance;

display a first variable variance bar above a stage axis on a graphical display device wherein said first variable variance bar is non-filled if said first variable variance is positive and is filled if said first variable variance is negative;

uploading a second variable value for said manufacturing stage from said database;

subtracting said second variable value from a second target value to obtain a second variable variance;

displaying a second variable value bar below said stage axis on said graphical display device wherein said second variable value bar is non-filled; and

displaying a second variable variance bar below said second variable value bar on said graphical display device if said second variable variance is positive wherein said second variable variance bar is filled.

2. The method according to Claim 1 wherein said first variable comprises work-in-progress (WIP).

3. The method according to Claim 1 wherein said second variable comprises production moves.

4. The method according to Claim 1 wherein said filled bars comprise any of the group of: color filled, texture filled, and gray-scale filled.

5. The method according to Claim 1 wherein said manufacturing process comprises integrated circuit manufacturing.

6. The method according to Claim 1 further comprising displaying said first variable, said first variable variance, said second variable, and said second variable variance for said stage as text data on said graphical display device.

7. The method according to Claim 1 further comprising displaying a sub-category bar above said first variable variance bar wherein said sub-category bar comprises an amount of said first variable within a defined sub-category and wherein said subcategory bar is distinctively filled.

8. A data processing and display method for use in interactive integrated circuit manufacturing process management comprising:

uploading a work-in-progress value for a manufacturing stage from a database;

subtracting said work-in-progress value from a work-in-progress target value to obtain a work-in-progress variance;

displaying a work-in-progress variance bar above a stage axis on a graphical display device wherein said work-in-progress variance bar is non-filled if said work-in-progress variance is positive and is filled if said work-in-progress variance is negative;

uploading a production moves value for said manufacturing stage from said database;

subtracting said production moves value from a production moves target value to obtain a production moves variance;

displaying a production moves value bar below said stage axis on said graphical display device wherein said production moves value bar is non-filled; and

displaying a production moves variance bar below said production moves value bar on said graphical display device if said production moves variance is positive wherein said production moves variance bar is filled.

9. The method according to Claim 8 wherein said filled bars comprise any of the group of: color filled, texture filled, and gray-scale filled.

10. The method according to Claim 8 further comprising displaying said work-in-progress value, said work-in-progress variance, said production moves value, and said production moves variance for said stage as text data on said graphical display device.

11. The method according to Claim 8 further comprising displaying a sub-category bar above said work-in-progress variance bar wherein said subcategory bar comprises an amount of said work-in-progress value within a defined sub-category and wherein said sub-category bar is distinctively filled.

12. A data processing and display apparatus for use in interactive manufacturing process management comprising:

a means of uploading a first variable value and a second variable value for a manufacturing stage from a database;

a means of storing said first variable value, said second variable value, and computation results;

a means of calculating a first variable variance and a second variable variance; and

a graphical display means capable of displaying a first variable variance bar, a second variable value bar, and a second variable variance bar wherein said first variable variance bar is above a stage axis, is non-filled if said first variable variance is positive, and is filled if said first

variable variance is negative, wherein said second variable value bar is below said stage axis and is non-filled, and wherein said second variable variance bar is filled and is below said second variable value bar if said second variable variance is positive.

13. The apparatus according to Claim 12 wherein said means of calculating said first variable variance and said second variable variance comprises subtracting said first variable value from a first target value to obtain said first variable variance and subtracting said second variable value from a second target value to obtain said second variable variance.

14. The apparatus according to Claim 12 wherein said first variable comprises work-in-progress.

15. The apparatus according to Claim 12 wherein said second variable comprises production moves.

16. The apparatus according to Claim 12 wherein said filled bars comprise any of the group of: color filled, texture filled, and gray-scale filled.

17. The apparatus according to Claim 12 wherein said manufacturing process comprises integrated circuit manufacturing.

18. The apparatus according to Claim 12 wherein said graphical display means is further capable of displaying said first variable, said first variable variance, said second variable, and said second variable variance for said stage as text data.

19. The apparatus according to Claim 18 wherein said text data is displayed in response to a user input device.

20. The apparatus according to Claim 12 wherein said graphical display means is further capable of displaying a sub-category bar above said first variable variance bar wherein said sub-category bar comprises an amount of said first variable within a defined subcategory and wherein said sub-category bar is distinctively filled.